

**THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,	§	
	§	
	§	
v.	§	CASE NO. 2:22-CV-422-JRG-RSP
	§	
SAMSUNG ELECTRONICS CO., LTD.,	§	
SAMSUNG ELECTRONICS AMERICA,	§	
INC.,	§	

**CLAIM CONSTRUCTION ORDER**

On February 16, 2024, the Court held a hearing to determine the proper construction of the disputed term in United States Patents Nos. No. 9,137,701, 9,143,976 9,271,184, 9,277,433, 9,277,445, 9,521,578, 9,609,544. Before the Court are the Opening Claim Construction Brief (Dkt. No. 82) filed by Plaintiff Headwater Research LLC, the Responsive Claim Construction Brief (Dkt. No. 83) filed by Defendants Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (“Samsung”), and Plaintiff’s Reply (Dkt. No. 89). Also before the Court are the parties’ Patent Rule 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 76) and the parties’ Patent Rule 4-5(d) Joint Claim Construction Chart (Dkt. No. 93). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing, having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

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### **I. BACKGROUND**

Plaintiff alleges infringement of United States Patents No. 9,137,701 (“the ’701 Patent”), 9,143,976 (“the ’976 Patent”), 9,271,184 (“the ’184 Patent”), 9,277,433 (“the ’433 Patent”), 9,277,445 (“the ’445 Patent”), 9,521,578 (“the ’578 Patent”), 9,609,544 (“the ’544 Patent”), 10,237,773 (“the ’773 Patent”), and 11,405,224 (“the ’224 Patent”). Dkt. No. 42.

### **II. LEGAL PRINCIPLES**

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (*en banc*), *aff’d*, 517 U.S. 370 (1996). “In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva*, 135 S. Ct. at 841 (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See Phillips*, 415 F.3d at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *accord Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *accord Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* The

specification may also resolve the meaning of ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex*, 299 F.3d at 1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); accord *Phillips*, 415 F.3d at 1323.

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The Supreme Court of the United States has “read [35 U.S.C.] § 112, ¶ 2 to require that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “A determination of claim indefiniteness is a

legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus*, 134 S. Ct. 2120. “Indefiniteness must be proven by clear and convincing evidence.” *Sonix Tech. Co. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

#### IV. DISPUTED TERM

<b>“user of the device . . . perceiving any benefit from the application”            (’701 patent, claim 2<sup>1</sup>; ’976 patent, claim 2; ’184 patent, claim 2; ’433 patent, claim 3;            ’445 patent, claim 2; ’578 patent, claim 4; ’544 patent, claim 2)</b>	
<b>Plaintiff’s Proposed Construction</b>	<b>Defendant’s Proposed Construction</b>
No construction necessary. Plain and ordinary meaning.	Indefinite

Dkt. No. 82 at 8.

##### (1) The Parties’ Positions

Plaintiff contends this term, when viewed in the light of the intrinsic evidence, in particular the surrounding claim language, is not indefinite. (Dkt. No. 82 at 4-15.) Plaintiff further supports its position with expert testimony. (*Id.*)

First, plaintiff argues the language “perceiving a benefit,” in context “refers to an application benefit that is perceptible to human end-users.” (*Id.* at 7.) Plaintiff argues this provides reasonably certain bounds as a user’s perception is not based on a user’s subjective opinions. (*Id.* at 8.) Plaintiff contends the claims’ direction to determining if an application is in the background

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<sup>1</sup> Plaintiff contends the use of this claim term is substantially the same between the asserted patents as are the portions of the specifications cited in support of plaintiff’s position. (Dkt. No. 82 at 23.) Plaintiff cites the ’701 Patent as exemplary of the other asserted patents for this issue. (*Id.*) Defendants likewise cite the ’701 Patent throughout its briefing. (*See e.g.* Dkt. No. 83 at 7.) As such the Court cites the ’701 Patent in its analysis as exemplary.

or foreground supports this position, particularly in light of the “directly interacting” language. (*Id.* at 9-10.) Plaintiff contends this language makes it clear that the dependent claims at issue are directed to determining if a user is using an application, either scrolling or selecting under “directly interacting” or viewing or listening under “perceiving any benefit.” (*Id.*)

Second, plaintiff points to the specification supporting this same position. (*Id.* at 10.) Plaintiff points to ’701 Patent at 8:4-56. (*Id.* at 10-11.) Plaintiff contends these examples demonstrate that “benefit” in context is tied to perception, rather than including beneficial but unnoticeable functions like downloading updates. (*Id.* at 11-12.) Plaintiff argues that as the purpose of the claims is not based on the desirability or undesirability of the application operation, “benefit” is not subjective. (*Id.* at 13.)

Plaintiff further faults defendants for proffering no expert testimony in support of their position. (*Id.* at 4.) Plaintiff contends that without expert testimony, and in light of the above intrinsic support, defendants cannot meet their burden of proof to demonstrate indefiniteness. (*Id.*)

Defendants argue the term is facially subjective and the patent provides no indication as to the term’s objective boundaries and should thus be found indefinite. (Dkt. No. 83.)

First, Defendants argue the term “necessarily requires a determination into whether a particular user ‘perceives any benefit’ from an application” and is thus based on the subjective opinion of a user. (*Id.* at 6.) Defendants cite testimony from an inventor of the patents at issue that “whether a user of a device perceiving a benefit” could be subjective. (*Id.* at 4.)

Second, Defendants argue that neither the specifications nor the claims provide any objective bounds for the term. (*Id.* at 8-14.) Defendants contend the single reference to “benefit” in the specification does not permit plaintiff’s alleged rewrite of the term or provide any objective bounds. (*Id.* at 8-10.) Defendants further contend that the portion of the specification cited by

plaintiff does not provide examples of benefits but rather provides examples of when a “‘device service activity’ can ‘impact network performance’ or ‘reduce network capacity and/or network resource availability.’” (*Id.* at 10.) Defendants also argue that even if the cited portion provided examples of “perceiv[ing] a benefit,” such examples, as a matter of law, do not provide an objective standard. (*Id.* at 11.)

Defendants argue that the claims themselves also provide no objective boundaries for the term. (*Id.* at 13-14.) Defendants argue that claim differentiation dictates that “directly interacting” and “perceiving any benefit” must be distinct inquiries contrary to plaintiff’s position. (*Id.* at 13.) Defendants also argue that plaintiff fails to explain how Claim 1’s discussion of foreground and background operation defines the scope of the disputed term. (*Id.* at 14.)

Third, defendants argue that plaintiff rewrites the claims impermissibly to avoid indefiniteness, effectively replacing “benefit” with “information.” (*Id.* at 15-17.) Defendants cite the deposition of plaintiff’s expert where he provided that replacing “benefit” with “noticeable operation” “seems to be pretty close to the opinion I state.” (*Id.* at 16.) Defendants contend such an understanding would effectively eliminate “benefit” and should be rejected as revisionist claim drafting. (*Id.* at 16-17.)

Defendants also contend this rewrite only creates additional ambiguity, now as to “user.” (*Id.* at 17-19.) Defendants again cite the deposition of plaintiff’s expert where he provided that if a user played music on his phone but left the phone in another country he would no longer be a user within the meaning of the claim. (*Id.* at 18.) Defendants contend this creates ambiguity as to when someone is a user of a device. (*Id.*)

Lastly, defendants argue that they do not need an expert to maintain their position and that the purpose of the patent does not resolve the alleged ambiguity. (*Id.* at 19-21.) Defendants note

that while they have not retained an expert of their own, one is not required and the testimony of an inventor and plaintiff's expert support defendants' position regardless. (*Id.* at 19-20.) Defendants argue that the purpose of the patent here also fails to provide objective bounds to the purely subjective term "benefit" and none of the case law cited by plaintiff dealt with such a term. (*Id.* at 20-21.)

In reply, plaintiff re-urged its positions. Plaintiff also responded to defendant's citation to inventor testimony, noting that he had not reviewed the patent, so his testimony was not that of a POSITA in light of the intrinsic record. (Dkt. No. 89 at 5-6.)

At the February 16, 2024 hearing, Plaintiff reiterated that the term is not indefinite emphasizing that the claims themselves and the specification provide sufficient context for a POSITA to understand the term. Defendants responded that "perceiving any benefit" is dependent on what a user would consider a benefit and the specification provides no guidance in determining what is a benefit to a user.

## (2) Analysis

Claim 1 and 2 of the '701 Patent, for example, recites (emphasis added)

1. A wireless end-user device, comprising:  
 a wireless wide area network (WWAN) modem to communicate data for Internet service activities between the device and at least one WWAN, when configured for and connected to the WWAN;  
 a wireless local area network (WLAN) modem to communicate data for Internet service activities between the device and at least one WLAN, when configured for and connected to the WLAN;  
 one or more processors configured to  
     determine, for a first end-user application capable of running in a background state and capable of running as a foreground application, whether the application is running in a background state or as a foreground application, and control, via an application program interface (API), application access for Internet service activities provided through the WWAN modem and the WLAN modem, to, based on a first differential traffic control policy, selectively block and allow access by the first end-user application to the WWAN modem at a time when data for Internet



service activities is communicated through a WWAN modem connection to the at least one WWAN,

wherein the access is selectively blocked based on a determination that the first end-user application is running in a background state, and wherein the access is selectively allowed based on a determination that the first end-user application is running as a foreground application.

2. The wireless end-user device of claim 1, wherein the one or more processors are configured to determine that the first end-user application is running in a background state when *a user of the device* is not directly interacting with that application or *perceiving any benefit from that application*.

The specification discloses:

Another example of device service activity behavior that can impact network performance is applications that maintain persistent network communication that generates a relatively high frequency of network data packets. Some applications have persistent signaling that falls into this category. Specific examples include frequent device signaling sequences to update widgets on a desktop; synchronize user data such as calendars, contacts, email, and/or other information/content; check or update email or RSS feeds; access social networking websites or tools; online text, voice or video chat tools; update real-time information; and conduct other repetitive actions. Additional application behavior that can significantly tie up network resources and capacity include, for example, conference meeting services, video streaming, content update, software update, and/or other or similar application behavior. For example, even when the user is not directly interacting with or benefiting from this type of application, the application can be running in the background and continuing to consume potentially significant network resources.

For example, the types of service activities and/or device behavior that can reduce network capacity and/or network resource availability include software updates for OS and applications, frequent OS and application background network accesses and signaling, frequent network discovery and/or signaling (e.g., EtherType messages, ARP messages, and/or other messaging related to network access), cloud synchronization services, RSS feeds and/or other background information feeds, application (e.g., web browser) or device behavior reporting, background email downloads, content subscription service updates and downloads (e.g., music/video downloads, news feeds, etc.), text/voice/video chat clients, virus updates, peer to peer networking applications, inefficient network access sequences during frequent power cycling or power save state cycling, large downloads or other high bandwidth accesses, and/or greedy application programs that continually and/or frequently access the network with small transmissions or requests for information. Various other examples will now be apparent to one of ordinary skill in the art.

'701 patent at 8:4-56

In this context, the Court finds that the term “perceive any benefit” is not subjective and is sufficiently definite. The claims themselves provide significant context guiding a POSITA’s understanding of the term. First, the claims provide that the “perceive any benefit” inquiry is directed to determining if an application is running in the foreground or background. This guides a POSITA’s understanding of the inquiry away from a question of preference and towards a question of use. Second, “perceive” focuses a POSITA’s understanding of “benefit” to what is actively perceptible by the user rather than unnoticeable processes. This is distinct from determining if an application is providing a benefit to the user as Defendant’s indefiniteness argument effectively requires. In other words, the emphasis of that phrase is on “perceiving” whatever the “benefits” of the application may be, rather than on whether the user perceives the operation *as* beneficial.

The specification provides further context that “benefit” is to be understood broadly without regard to user preferences. The cited portion of the specification provides a clear description of what would be considered background in the foreground/background determination under the “directly interacting with” and “perceiving any benefit” inquiry. In particular, the specification provides that background downloads such as emails, messages, or music would fall into the background activity category under the “directly interacting with” and “perceiving any benefit” inquiry. This cabins what a POSITA would understand “benefit” to cover.

Defendant’s argument that testimony from an inventor supports a finding of indefiniteness is unavailing. While an inventor is almost undoubtedly a POSITA, here the inventor is a POSITA offering opinions without the context of the patent specification or the claims. (*See* Dkt. No. 89-

2.) As such his testimony is of little weight, especially where plaintiff relies on intrinsic evidence to support its definiteness position.

Likewise, Defendant's argument that plaintiff rewrites the term and introduces further ambiguity is not persuasive. First, the Court does not believe Plaintiff's use of "noticeable operation" or "information" in explaining the scope and meaning of "benefit" in context is an attempt to rewrite the claims. Plaintiff provides these terms to explain what the context provides. Second, "user" is not argued to be a subjective term that requires objective bounds from the specification. Rather, Defendant's indefiniteness argument as to "user" under the alleged rewrite of the claims is based only on alleged vagueness in a "proximity requirement for the word 'user.'" (See Dkt. No. 83 at 18.) The Court does not find this alleged vagueness amounts to indefiniteness.

The Court therefore hereby finds "user of the device . . . perceiving any benefit from the application" is definite and has its plain and ordinary meaning.

### **VIII. CONCLUSION**

The Court adopts the constructions set forth in this opinion for the disputed term of the patent-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

**SIGNED this 20th day of February, 2024.**

  
ROY S. PAYNE  
UNITED STATES MAGISTRATE JUDGE